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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/519,129	03/06/2000	KENJI UEDA	A-346	7895

802 7590 10/28/2003

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EXAMINER

ANGEBRANDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 10/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

CLO-15

Office Action Summary

Application N .

09/519,129

Applicant(s)

UEDA ET AL.

Examiner

Martin J Angebranndt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1 The response provided by the applicant has been read and given careful consideration.

Responses to the arguments offered by the applicant are presented after the first rejection to which they are directed.

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3 Claims 1,(7/1), 8 and (10-13/8) are rejected under 35 U.S.C. 102(b) as being fully anticipated by Brady et al. '546, in view of Keane et al. '932 and Senga et al. '677.

Brady et al. '546 teach a wafer substrate which is coated with a photoresist (photopolymer) material. The photoresist laminate is precut, with the photoresist sandwiched between a MYLAR and a polyolefin sheet and bonded to a transport tape. The polyolefin layer is removed and the exposed portion of the photoresist is contacted with the wafer and adhered thereto. The use of vacuum chucks (74 and 85) is disclosed. (5/13-14, 5/47 and 6/13-14)

Keane et al. '932 teach that dry resist carrier films come in roll form or may be cut into any shape and stacked.

Senga et al. '677 teach the serial feeding of sheets containing a photosensitive coating from a cassette. These include photosensitized printing plates (1/38-45)

It would have been obvious to modify the process of Brady et al. '546 to use precut dry resist sheets and feed them in a manner similar to that of Senga et al. '677 to the carrier tape rather than rolls and cut them as in the example to save the cutting step as it is old and well known in the art that the dry resist films are available as stacks of precut sheets as evidenced by Keane et al. '932.

The limitations of claims 10 and 11 are considered intended use as the means are described as means for handling these films and the films are not described as part of the apparatus. The examiner holds that the semiconductor/silicon substrates described inherently are able to function as supports for holographic recording materials.

The applicant argues that the iterative feeding of the sheets is not taught by the reference as a backing tape is used. The examiner holds that the claims currently embrace the example of the reference as it feeds the resist decals cut from the sheets iteratively/repeatedly via the carrier tape and the Keane et al. '932 and Senga et al. '677 references teach stacked photosensitive sheets with Keane et al. '932 specifically establishing that precut stacks of these are old and recognized alternatives to the roll form.

The applicant argues as if the term "iteratively" precluded continuous processes. The meaning of the term is repeatedly, which merely indicates that the event occurs more than once. (see the meaning in "The Random House College Dictionary", pp. 711 (1973)) The use of either batchwise or continuous modes is held by the examiner to be embraced by the language "iteratively". The polyolefin layer of Brady et al. '546 is held to be a separator within the meaning of the claims and being removed only before contacting the underlying resist with the wafer substrate is held to protect the photoresist film from dust or mechanical abrasion prior to application. The mylar layer on the other side provide protection of the other surface of the resist film throughout the process. The use of vacuum chucks is disclosed in Brady et al. '546 in the portion cited above. The applicant has not provided any evidence that the process using the sheets fed on an adhesive tape have more problems with dust than the process of the invention. The comparison is with roll media. (page 8 of specification)

4 Claims 1,(7/1), 8 and (10-13)/8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brady et al. '546 combined with Keane et al. '932 and Senga et al. '677, further in view of Ueda JP 09-054539 and Smith et al. '778.

Ueda JP 09-054539 teaches holographic dry plates which comprise either a supporting film, a photopolymeric holographic recording medium, a substrate, a tacky adhesive layer and a light absorption film or a supporting film, a photopolymeric holographic recording medium, a substrate, a light absorbing adhesive film and a substrate. The peeling of the separator from the photosensitive layer and the support and contacting it with one side of a support and peeling the separator from a tacky adhesive layer and light absorption film and contacting it with the other side of the support is disclosed. (abstract).

Smith et al. '778 teaches that for dry film resists various materials may be used as supports and that these supports may be provided with antihalation, anchor or adhesive layers.

The examiner holds that the limitations of claims 10 and 11 are considered intended use as the means are described as means for handling these films and the films are not described as part of the apparatus, but anticipates the possibility that the applicant will add the film as part of the apparatus limitations.

It would have been obvious to one skilled in the art to use the means disclosed by Brady et al. '546 combined with Keane et al. '932 and Senga et al. '677 in the process of Ueda JP 09-054539 with a reasonable expectation of achieving the desired result based upon the disclosed functionality within the photoresist handling art and with the advantage of continuous processing and upon the teaching within Smith et al. '778 that the use of adhesive, anchor or antihalation layers is desirable for use with dry resist materials.

The rejection stands for the reasons provided above with the examiner noting that the applicant citing the reference does not preclude its use in a rejection and that the teachings of the Smith et al. references are not in any way limited to the "main teachings". As the materials used in the references and disclosed in the instant application are photoresist materials, the benefits of antihalation, anchor or adhesive layers would be expected to be realized.

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5 Claims 1,2,(7/1,2), 8-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brady et al. '546 combined with Keane et al. '932 and Senga et al. '677, in view of Garber '221 and Platzer et al. '873.

Garber '221 teaches the lamination of photoresist material in a vertical orientation and cutting of the film to fit. The benefit of the more vertical orientation is that the resist is applied without wrinkles or the like.

Platzer et al. '873 teaches an apparatus for peeling carrier films from photoresists and the like which require little horizontal space and does not require the use of an adhesive tape or element to perform the peeling. (2/67-3/5).

It would have been obvious to one skilled in the art to use the means disclosed by Garber '221 and Platzer et al. '873 in place of those used in the process of Brady et al. '546 combined with Keane et al. '932 and Senga et al. '677 based upon the disclosure of equivalent function and the reduced space requirements and wrinkling disclosed as advantages or to use orient the peeling and lamination apparatus of Brady et al. '546 combined with Keane et al. '932 and Senga et al. '677 to gain the advantages attributed to this orientation by Garber '221 and Platzer et al. '873.

The examiner notes that the equivalence of handling dry resists in a roll form and in sheet form is established as old and well known by Keane et al. '932 and therefore Garber '221 need not show that. The benefits ascribed to the use of the vertical orientation by Garber '221 and Platzer et al. '873 would be expected to be realized as the references all deal with handling dry resist films.

6 Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brady et al. '546 combined with Keane et al. '932, Senga et al. '677, Garber '221 and Platzer et al. '873, further in view of Ueda JP 09-054539 and Smith et al. '778

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The examiner holds that the limitations of claims 10 and 11 are considered intended use as the means are described as means for handling these films and the films are not described as part of the apparatus, but anticipates the possibility that the applicant will add the film as part of the apparatus limitations.

It would have been obvious to one skilled in the art to use the means disclosed by Brady et al. '546 as modified by Keane et al. '932, Senga et al. '677, Garber '221 and Platzer et al. '873 in the process of Ueda JP 09-054539 with a reasonable expectation of achieving the desired result based upon the disclosed functionality within the photoresist handling art and with the advantage of continuous processing and upon the teaching within Smith et al. '778 that the use of adhesive, anchor or antihalation layers is desirable for use with dry resist materials.

The rejection stands for the reasons provided above without further comment as no further arguments were directed at this rejection.

7 THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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8 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Angebranndt whose telephone number is (703) 308-4397.

I am normally available between 7:30 AM and 5:00 PM, Monday through Thursday and 7:30 AM and 4:00 PM on alternate Fridays.

If repeated attempts to reach me are unsuccessful, my supervisor may be reached at (703) 308-2464.

Facsimile correspondence should be directed to (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Martin J. Angebranndt', is positioned above the printed name.

Martin J. Angebranndt
Primary Examiner, Group 1750
February 12, 2003